

KING (E.W.)

## STATISTICS OF PLACENTA PREVIA.

COLLECTED FROM THE PRACTICE OF PHYSICIANS IN THE STATE OF INDIANA.

ENOCH W. KING, M. D., GALENA, IND.

From the earliest days of medical practice, of which we have any record, the condition that we now recognize by the term placenta previa has been one of dread to the practitioner of midwifery, and one of interest to the student of obstetrics. Its extreme danger to both mother and child, make it a source of anxiety, while its rare occurrence is an obstacle to its study; the experience of the most learned obstetricians being confined comparatively to but few cases. The results of no one man's observations and study can be accepted as orthodox teaching in any branch of medical science, much less upon this subject, where even the largest opportunities furnish but little data.

Recognizing this fact, prompted Churchill, Simpson, Trask, Read and others to collect and study statistically, the published experience of the medical profession on this subject; and undoubtedly induced Dr. Sutton, in his valuable paper presented to this society at its meeting last year, to make use of the following expression: "That many of our physicians whose range of practice is principally confined to the country, have a large amount of valuable unpublished experience on this subject, which if collected in the form of statistics, would throw light on the frequency of the occurrence of placenta previa,



the modes of treatment principally adopted and the fatality attending this accident within our state."<sup>1</sup>

As there was no action taken by the state society upon a suggestion made by Dr. Sutton, that a special committee be appointed for that purpose, I consulted a few of my most intimate professional friends as to the expediency of attempting it, and concluded to voluntarily undertake the work myself, and will present you to-day the results of my efforts.

I issued the following circular letter, which I sent through the secretaries of the county societies, auxiliary to the state society, and in counties in which there was no county society, I sent a copy direct to every physician whose address I could obtain, my object being to reach every regular physician in the state:

GALENA, FLOYD COUNTY, IND., AUGUST 1, 1878.

DEAR DOCTOR—I am preparing a statistical report of cases of placenta previa that have occurred in this state, to be presented at the Indiana State Medical Society, in May, 1879.

Therefore I address you this circular and respectfully request you to fill out the annexed blank and return to me at your earliest convenience, or at least before April first, 1879.

If more than one case has come under your observation please report them, embodying the points suggested in the circular. If no cases have occurred in your practice, please return the blank with that statement, that I may know how universal has been the response to my circular.

Due credit will be given in the compiled report to each reporter.

I am, Sir, very respectfully, etc.,

ENOCH W. KING, M. D.

*Report of a case of Placenta Previa occurring....., 18.....*

*in the practice of..... M. D.*

1. Name (or initials) of patient and age .....
2. Number of previous pregnancies.....
3. The time of pregnancy, when hemorrhage commenced, with amount and frequency of recurrence.....
4. Condition of patient previous to and during confinement.....
5. Placental presentation, partial or complete.....
6. Presentation of child.....
7. Treatment.....
8. Result to mother.....
9. Result to child.....
10. Remarks .....

(1) State Transactions, 1878, page 111.

I feel gratified with the responses received, many returning the circular with the statement that no case had come under their observation, others reporting their experience. Those, with what I have collected from reports in state transactions and medical journals that have been within my reach, aggregate one hundred and twelve cases, which I have tabulated in the following manner, and have endeavored to give due credit to each reporter; and as near as possible, consistent with space, have used the reporter's own expression, and thus enable others to study the cases themselves and see if they think I am justified in the conclusions I make in regard to them.

NO. OF CASE.	NAME AND ADDRESS OF REPORTER.	DATE OF CONFINEMENT.	INITIALS OF PATIENT.	AGE.	NUMBER OF PREGNANCY.	TIME OF PREGNANCY WHEN HEMORRHAGE COMMENCED, WITH AMOUNT AND FREQUENCY OF OCCURRENCE.		
1	Alexander, S. J., New Albany		Mrs. D...	40	Several...	Do not remember; I was called in consultation.		
2	Alexander, S. J.	June 30, 1870	Mrs. B...	25	Fourth...	Several during the sixth and seventh month, often repeated and severe.		
3	Alexander, S. J.		German.	30	Mult....	Nothing known of the case until called at full term; flooding excessively, and much exhausted.		
4	Alexander, S. J.	April 3, 1878.	Mrs. M...	45	Seventh.	At full term and ten days before labor, not severe; was much exhausted when I was first called. Had been in charge of homeopath, who was "waiting for pains."		
5	Allen, Hiram P., Reelsville	Oct. 13, 1878.	H. G....	38	Seventh.	A light hemorrhage at close of eighth month, no other till last of ninth month; six hours afterwards, found her much exhausted and drenched with blood.		
6	Bates, A. J., Upland	June 22, 1878	Mrs. T....		Fifth....	At eight and half months, with severe hemorrhage.		
7	Beck, Joseph R., Ft. Wayne	Oct. 3, 1872...	W. R. W.	28	Third....	Twenty-seventh week had just ended. Had only one hemorrhage, large in amount.		
8	Beck, Joseph R.	Jan. 3, 1873...	R. S. L....		Second...	Had five or six alarming hemorrhages within the thirtieth week; had but one while under my care.		
9	Beck, Joseph R.	Apr. 5, 1873.	H. W. G.	32	Fifth....	Just after completion of the seventh month, quite large. Again, three days later, also large. Delivered within three hours after second hemorrhage.		

PRESENTATION OF PLACENTA.	PRES-ENTATION OF CHILD.	TREATMENT.	RESULT TO MOTHER.	RESULT TO CHILD.	REMARKS.
Complete....		Turned and delivered easily. Did not rally from the exhaustion, and in a few hours died.	Died.....	Living	In the practice of the late Dr. P. S. Shields.
Complete....		Quiet, rest, cool drinks and astringents, tampon several times, brought on delivery at close of seventh month. Dilatation of os easily accomplished by manipulation, then turned and delivered.	Died.....	Dead..	Mother died in two or three hours, perhaps from uterine hemorrhage.
Complete....		Os uteri being easily dilated, I immediately turned and delivered.	Recov....	Living	
Complete....	Shoulder	Removed a tampon which had been introduced several hours before; os well dilated; passed hand thro' placenta, seized feet and delivered, reacted well under ergot and stimulants	Died.....	Living	Mother died on the thirtyninth day of septicemia.
Complete....	Head....	"With my right hand I peeled the placenta loose, while I made pressure on the perineum with my left and napkins, which stopped hemorrhage. Instruments arriving, we delivered immediately."	Died.....	Dead..	
Complete....	Head....	Controlled hemorrhage with ergot, made an opening through placenta; patient would not submit to turning or any other method of delivery. Completed in twenty-four hours.	Recov....	Dead...	
Partial.....	Vertex..	Gave hypodermic ergot at once; head came down rapidly, stopped the bleeding; delivery completed in two hours.	Recov....	Dead...	
Complete....	Vertex..	She had had tampon after tampon before I saw her, with bad results. I gave hypodermic ergot largely, introduced a steel sound within the os, turned it rapidly around, sweeping the attached placenta loose, and delivered in less than an hour. The hemorrhage ceased after complete detachment of placenta.	Recov....	Dead...	I do not offer any apology for my treatment of placenta previa, although my experience has been limited. In this, as in everything, I am radical in my views. The mother occupies a more or less prominent place in her family and in society, and greater or less interests depend upon her life. The child has all these to attain. For these reasons, I never pay the slightest attention to the fetus, my only aim being to save the mother.
Complete....	L. O. A..	At first hemorrhage; rest, opium and per-chloride iron. Second time, ergot; forcible detachment of whole placenta; dilatation rapid and by force, and premature delivery.	Recov....	Dead...	

NO. OF CASE.	NAME AND ADDRESS OF REPORTER.	DATE OF CONFINEMENT.	INITIALS OF PATIENT.	AGE.	NUMBER OF PREGNANCY.	TIME OF PREGNANCY WHEN HEMORRHAGE COMMENCED, WITH AMOUNT AND FREQUENCY OF OCCURRENCE.						
10	Beust, B., New Albany.....	Nov., 1868....	Mrs. G....	38	Sixth....	Slight hemorrhage every month during the last three months of pregnancy, lasting one or two days at each recurrence.						
11	Blunt, M. S., Mt. Vernon.....	.....	Mrs. S....	.....	Plurip....	About six weeks before expected confinement, quite a loss. Three weeks later, evidence of quite a loss.						
12	Blunt, M. S.....	Oct. 6, 1868...	Mrs. H....	.....	First....	Was in charge of a midwife who, on discovering her condition had sent for a physician, who went, and after ordering her some opium and acetate of lead left her still in hands of midwife. Found her flooding profusely.	Complete....	Head.....	Os dilated to size of a silver quarter dollar. Tampon applied. Consultation decided upon delivery as quickly as possible; removed tampon; os dilatable; turned and delivered, occupying but a few minutes and causing very little distress to mother.	Died.....	.....	The womb contracted well, but the mother sank and died in fifteen or twenty minutes, much to the surprise of both of us.
13	Bray, M. J., Evansville.....	—, 1856....	.....	40	Second....	At birth, once.	Complete....	Head.....	The child was turned, and delivered feet first.	Recov....	Dead ...	
14	Brill, J. H., Pittsburgh.....	May 19, 1873	Mrs. M....	26	First....	Two months before full time, recurred from one to three times a week; at full term, appearances indicated that a frightful hemorrhage had taken place, but during labor very little lost.	Complete....	Head.....	When I first arrived hemorrhage had ceased and no uterine contractions. Gave quinine, opium, rest, etc. At eleven A. M. next day found her in labor contractions, feeble; quinine and ergot; at three P. M. applied forceps and delivered.	Died.....	Dead ...	Mother died in seven days; child had evidently been dead some days. Reported in "Indiana Journal of Medicine," August, 1875, page 145.
15	Cannon, G. H., New Albany	April 9, 1878.	M. T....	28	Fourth....	Two weeks before full term; delivery effected within two days; bleeding profuse.	Partial .....	Vertex...	Tampon thirty-six hours, then rupture of membranes and dilatation with fingers; delivery with forceps.	Recov....	Dead ...	
16	Clapp, W. A., New Albany..	Jan. 3, 1869 ..	M. K....	35	Sixth....	Three months before full term; often and quite free till full term, when delivered.	Complete....	.....	In consultation with the late Dr. P. S. Shields, os being dilatable, he turned and delivered. Doing well when three hours afterwards suddenly fainted and died.	Died.....	Living	We supposed the mother died from heart clot. There was no post partum hemorrhage.
17	Cooper, W., New Albany.....	About 1840...	.....	.....	.....	Do not remember, was in consultation ten miles in the country.	Complete....	.....	Doctor in charge said he was obliged to remove the placenta before child was delivered. Found her pulseless, and died in a few moments after I reached the house.	Died un-delivered.	.....	
18	Cooper, W.....	1843 or '44....	Mrs. B....	40	Second....	At full term.	Partial .....	Head.....	Tampon immediately, and not removed until pains came on, then the membranes were ruptured; there was no further trouble.	Recov....	Dead ...	
19	Cooper, W.....	.....	Mrs. M....	35	Fifth....	At about ten days before full term.	Partial .....	Head.....	Tampon applied at once, repeated every two or three days, until labor came on; perfect quiet enjoined.	Recov....	Dead ...	

PRESER-TATION OF PLACENTA.	PRESEN-TATION OF CHILD.	TREATMENT.	RESULT TO MOTHER.	RESULT TO CHILD.	REMARKS.
Complete....	Head.....	Tamponed with alum-water for about twenty minutes, then turning of the child with extraction.	Recov....	Living	
.....	.....	When I reached the house at second attack, not an hour having elapsed since first pain, I found both child and placenta expelled together.	Recov....	Living	Child died in a few hours.
Complete....	Head.....	Os dilated to size of a silver quarter dollar. Tampon applied. Consultation decided upon delivery as quickly as possible; removed tampon; os dilatable; turned and delivered, occupying but a few minutes and causing very little distress to mother.	Died.....	.....	
Complete....	Head.....	The child was turned, and delivered feet first.	Recov....	Dead ...	
Complete....	Head.....	When I first arrived hemorrhage had ceased and no uterine contractions. Gave quinine, opium, rest, etc. At eleven A. M. next day found her in labor contractions, feeble; quinine and ergot; at three P. M. applied forceps and delivered.	Died.....	Dead ...	
Partial .....	Vertex...	Tampon thirty-six hours, then rupture of membranes and dilatation with fingers; delivery with forceps.	Recov....	Dead ...	
Complete....	.....	In consultation with the late Dr. P. S. Shields, os being dilatable, he turned and delivered. Doing well when three hours afterwards suddenly fainted and died.	Died.....	Living	
Complete....	.....	Doctor in charge said he was obliged to remove the placenta before child was delivered. Found her pulseless, and died in a few moments after I reached the house.	Died un-delivered.	.....	
Partial .....	Head.....	Tampon immediately, and not removed until pains came on, then the membranes were ruptured; there was no further trouble.	Recov....	Dead ...	
Partial .....	Head.....	Tampon applied at once, repeated every two or three days, until labor came on; perfect quiet enjoined.	Recov....	Dead ...	

NO. OF CASE.	NAME AND ADDRESS OF REPORTER.	DATE OF CONFINEMENT.	INITIALS OF PATIENT.	AGE.	NUMBER OF PREGNANCY.	TIME OF PREGNANCY WHEN HEMORRHAGE COMMENCED, WITH AMOUNT AND FREQUENCY OF OCCURRENCE.
20	Cook, Ward, Pendleton.....	Nov. 30, 1856	P. J.....	Mult.....	Not definitely remembered; occasionally during latter part of gestation; at labor profuse and in imminent danger.	
21	Cook, Ward.....	July 20, 1858.	J. H.....	.....	Not known.	
22	Cross, J. B., Bainbridge.....	—, 1852.....	Mrs. K...	32	Sixth.....	In the sixth month, and recurred at the end of each month, until confinement; quantity large.
23	Cross, J. B.....	—, 1854.....	Mrs. Mc.	35	Fourth.....	Had continued some hours before I saw her.
24	Cross, J. B.....	—, 1865.....	Mrs. W..	33	Fourth.....	About seventh month; worse at the end of each month; quantity excessive, producing complete exsanguination and the most profound debility.
25	Daniel, David H., Otwell.....	Jan. 13, 1873.	V. B.....	20	Second....	At about six and a half months of gestation, continued until delivery; fifteen hours afterwards, profuse.
26	Darling, N. S., LaPorte.....	Aug. 19, 1878.	Mrs. M...	40	Eleventh	At about seven months; repeated hemorrhages for five or six weeks before I was called; found patient literally almost bled to death; lost but little blood after I entered the house.
27	Davis, R. A., New Albany...	Sept. —, 1878.	J. S.....	.....	Third.....	Within a week of full time; hemorrhage not severe; delivered in thirty hours.
28	Davis, J. R., Morris.....	July 15, 1868.	M. H.....	.....	Eighth....	At or near full term; recurred three times in seventy-two hours; large quantity.

PRES- SENTA- TION OF PLACENTA.	PRESEN- TATION OF CHILD.	TREATMENT.	RESULT TO MOTHER.	RESULT TO CHILD.	REMARKS.
Complete....	Vertex...	Turned and delivered by the feet.	Recov.....	Dead ..	
Partial.....	Vertex...	Found os well dilated and head low; pains had ceased and hemorrhage now slight. Ergot had been given, without effect. Delivered with forceps.	Recov.....	Living	
Complete....	Head.....	Used only means at hand; fingers with tampon dilated the os, then turned and delivered.	Recov.....	Dead ..	
Complete....	Head.....	Dilated os with fingers and tampon of rags; no uterine contractions; I saw necessity for immediate action; with jack-knife performed craniotomy, made traction and delivered.	Recov.....	Dead ..	I was miles from home in the country; no time to send for counsel or instruments.
Complete....	Head.....	Used my fingers with tampon; dilated the os, turned and delivered to the heads, which I brought through one at a time, as best I could.	Recov.....	Dead ..	Monstrosity. Had two heads complete, one soft and fleshy, the other hard; "this fleshy head came out about the middle of the occipital bone, fastened by a fibrous cord of two inches, and was about the size of the true head."
Complete....	Breech...	Strong uterine contractions; I at once gave ergot, passed hand through placenta, seized feet and delivered.	Recov.....	Living	Child died in half an hour.
Complete....	Head.....	At four A. M. found os slightly dilated; no pains; passed hand into vagina, intending to turn; "husband and wife Polander, could not speak English; woman complained, husband interfered and compelled me to desist;" tamponed thoroughly and gave ergot; pains came and delivered by twelve M.	Died.....	Dead ..	Mother died in about four days, in consequence of the great loss of blood previous to my taking charge of the case.
Partial.....	Natural.	Woman stating she was only eight months pregnant; gave opium to quiet, but labor came on and soon delivered.	Recov.....	Living	
Complete....	Head.....	Used tampon, not effectually perhaps as I might have done, as it did not control hemorrhage at any time more than a few hours; when os dilated, introduced hand, separating placenta from side; turned and delivered; full dose of ergot before turning.	Recov.....	Living	

NO. OF CASE.	NAME AND ADDRESS OF REPORTER.	DATE OF CONFINEMENT.	INITIALS OF PATIENT	AGE.	NUMBER OF PREGNANCY.	TIME OF PREGNANCY WHEN HEMORRHAGE COMMENCED; WITH AMOUNT AND FREQUENCY OF RECURRENT.		
29	Day, B. J., Evansville.....	—, 1869.....	Mrs. G....	Fifth....		Not definitely remembered; only saw patient at or near full term; considerable blood had been lost.		
30	DeForrest, D. A., Boonville..	Mar. 3, 1878.	C. D.....	26	Fourth....	At commencement of labor and alarming.		
31	Dollen, T. C., Trinity Springs	May 13, 1878.	R. W.....	34	Sixth....	About three weeks before full term; recurred every three to five days; at labor very copious.		
32	Evans, E. B., Greencastle.....	Aug. 7, 1876.	W. H.....	32	Third....	Seventh month slight, again in four weeks, again at night severe; when called found her pulseless and almost exsanguine; could not speak above a whisper; cold and pulseless.		
33	Fleming, W. A., Pleasantville	—, 1870.....	M. M.....	38	Eighth....	At six weeks or two months before regular labor; was easily controlled; recurred at intervals, until labor, when there was a great deal of hemorrhage.		
34	Fleming, W. A.....	—, 1874.....	S. H.....	25	Second...	Above remarks applicable.		
35	Freeman, Wm., Pennville....	May 30, 1877.	Mrs. G....	30	Third....	In the latter part of the seventh month; recurred in two weeks moderate; at the last of eighth month, more frequent.		
36	Gobbel, Fred., Leavenworth.	Aug. 21, 1875	M. J. P....		Sixth....	At nine months as first symptom of labor; suppose she had lost as much as five pints.		
37	Haughton, R. E., Indianapolis	—, 1856.....	Mrs. A....		Third....	In the seventh month, with recurrences every few days, producing decided debility before I was called to the case; hemorrhage alarming.		
38	Heath, W. N. Sharpsville...	May 4, 1874...	Mrs. B....		Second...	Not until labor commenced; I arrived in an hour, found hemorrhage very profuse; much exhausted and extremities cold.		

PRES-ENTATION OF PLACENTA.	PRES-ENTATION OF CHILD.	TREATMENT.	RESULT TO MOTHER.	RESULT TO CHILD.	REMARKS.
Complete....		Tampon had been used without stopping hemorrhage; went immediately for feet and delivered without difficulty.	Died.....	Dead...	Mother died almost at completion of turning. Was an epileptic.
Complete....	Head....	Gave ergot; detached placenta, rapidly delivered it, and then the child.	Recov.....	Dead...	
Complete....	Head....	Dilated os with fingers as rapidly as possible; ruptured membranes and gave ergot; head pressing on cervix stopped all hemorrhage and nature terminated the labor.	Recov.....	Living.	
Complete....	Head....	Detached placenta at side, brought down feet and delivered to hips, plugging the os; remaining ten minutes, when delivered.	Recov.....	Living.	Child died after a few feeble respiratory efforts.
Complete....	Hand....	Detached one side of placenta; introduced hand and made a footling; aroused labor pains with quinine, ergot and cold to abdomen.	Recov.....	Dead...	
Complete....	Breech...	Found laceration in placenta, with fold of cord protruding; no pulsations, breech low down; allowed child to pass through placenta, which it did in thirty minutes.	Recov.....	Dead...	
Complete....	Head....	Used tampon until head was in inferior straight, then used forceps; delivered placenta entirely before using the forceps.	Recov....	Living.	
Complete....	Vertex...	Found her unconscious; gave large doses of quinine and ergot; introduced hand, turned placenta to one side and compressed it; pains coming on, the head became engaged in pelvis, stopping all hemorrhage; delivered in three hours.	Died.....	Dead...	As soon as delivered, hemorrhage came on profusely, and in fifteen minutes death ensued.
Central....	Head....	Detaching placenta sufficiently, introduced hand, brought down feet and delivered; pressure upon aorta; stimulants, tonics and position, yet the previous drain led to final exhaustion, and death soon after delivery.	Died.....	Dead...	
Complete....	Shoulder	Os dilated sufficiently to admit two fingers; assisted dilatation, when I turned and delivered.	Recov....	Dead...	

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39	Hibberd, Jas. F., Richmond	Jan. 18, 1868.	S. M. D.	Second...		January 15, quite free; January 17, free, and several times during the 18th; fainted several times before delivery.		
40	Hibberd, Jas. F.	—, 1850.						
41	Hibberd, J. F.							
42	Hobbs, A. G., Arthur.	May —, 1878.	M. S.	25	Second...	Slightly more than eight months; large gushes with every pain, which occurred every fifteen to thirty minutes.		
43	Hobbs, Wilson, Knightstown	—, 1856.	Mrs. W.	35		Occasionally during last month; never alarming until commencement of labor.		
44	Hon, U. H., Paoli.	Feb. 13, 1877.	Mc.D	45	Fifth .....	" Between two and three weeks before full term; recurred the 12th, at ten P. M.; awakened, thought she was bleeding to death; almost incessant, but freer during each pain; amount excessive, had soaked through sheet, feather-bed, straw mattress and running several feet on the floor by half-past eleven P. M.		
45	Horner, J. G., Lanesville.	Aug. 28, 1868	A. C. D.	44	Twelfth.	One slight hemorrhage at close of seventh month; no more until labor, at full term, when profuse for a few minutes.		
46	Jones, T. B., Lynnville.	Mar. 18, 1869.	N. F.		Fifth .....	Beginning of sixth month, twenty ounces; again at seven and a half months; at completion of eighth month, recurring every week, but not severe any time; fainted sev'l times.		
47	Kay, Robert, Greenville.	May —, 1861.	C. B.	38	Ninth....	At full term; found her flooding terribly.		
48	Kay, Robert.	Feb. 10, 1875.	M. E. M.	32	Seventh.	Often during the last few months, and reported as free.		

PRESENTATION OF PLACENTA.	PRESEN-TATION OF CHILD.	TREATMENT.	RESULT TO MOTHER.	RESULT TO CHILD.	REMARKS.
Complete....	Vertex...	Tampon imperfectly applied and of no service; os dilatable; without resistance passed hand under edge of placenta and turned.	Recov....	Dead ..	
Partial.....	Head.....	I did nothing but assist in the dilatation of the os with my fingers, and ruptured membranes at an early stage of labor.	Recov....	Living	Occurred about thirty or thirty-five years ago; my memory is too dim to give a more satisfactory history.
Partial.....	Head....		Recov....	Living	
Partial.....	Vertex...	Detached placenta as far as fingers would reach; plugged vagina; in two hours removed tampon; with hand in vagina and by external manipulations was enabled to seize foot, with two fingers through the os, which I drew down; acting as a plug, stopped hemorrhage, thence treated as a foulung.	Recov....	Living	
Partial.....	Face.....	Punctured membranes and gave ergot; after head well engaged, the bleeding stopped.	Recov....	Living	
	Natural.	Os would admit only one finger—firm, rigid and not dilatable; high in the pelvis; cool drinks, cold applications, quiet, ergot, elevation of foot of bed, insertion of lint with persulph. iron, rectal injections of cold water, etc.	Died at 8 A. M. of 13th.	.....	Two physicians arrived at six A. M., who decided that forceps could not be used, nor version resorted to because of high position of uterus and rigidity of the os uteri.
Complete....	Vertex...	Hemorrhage with first pain, which ruptured membranes and detached placenta; no further pains or hemorrhages; eight hours afterwards, I removed placenta, turned and delivered.	Recov....	Dead ..	
Complete....	Face.....	Detached placenta at side, introduced hand, brought down feet and delivered immediately; alcoholic stimulants and ergot.	Recov....	Living	
Complete....	Head.....	Found placenta filling the os; gave ergot; removed placenta; hemorrhage ceased and delivered in thirty minutes.	Recov....	Living	
Complete....	.....	Os rigid, could admit but one finger; ergot and cold applications; endeavored to detach and remove placenta, but could not succeed.	Died undelivered, 6 hrs. after labor set in.	.....	

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49	Kemper, G. W. H., Muncie.	June 7, 1874.	N. B. ....	22	Third....	First hemorrhage was June 4, characterized as a severe one.
50	King, E. W., Galena.....	Feb. 7, 1879.	L. E. ....	44	Seventh.	At seventh week, and light hemorrhage for three months; at seven months; at eight months, and at labor at eight and a half months, quite freely.
51	Knapp, Chas., Ferdinand.....	Apr. —, 1875.	Mrs. I. ....	30	Seventh.	At full term; called fifteen hours after sudden and severe hemorrhage; found her almost bloodless.
52	Malone, D. R., Edinburg.....	Sept. —, 1862	E. J. ....	24	Third....	About the seventh month; slight attacks and gradually increasing in quantity and frequency until first week, ninth month, when it was fearful for a short time.
53	Mathes, J. M., Carlisle.....	Aug. 27, 1876	S. D. ....	22	Second....	In the seventh month; was very profuse, until delivered, next day.
54	Mauck, J. R., E. Germantown	May 5, 1876.	E. L. ....	24	Second....	Full term; twelve hours before delivery, showed signs of syncope.
55	Mauck, J. R. ....	Dec. 17, 1877.	M. J. W. ....	36	Sixth....	At three months; slightly for five days, and returned every month until full term; when called, I found her pulseless and extremities cold.
56	Mavity, J. S., Fowlers.....	Dec. 12, 1876	M. M. ....		Sixth....	At full term, suddenly and severe.
57	Maxwell, S. C., Remington...	Autumn, '69	Mrs. E. ....		Seventh.	At eight months; repeated in two weeks, again in ten days, when delivered; at each time copious.
58	Maxwell, S. C. ....	Aug. —, 1874	Mrs. M. ....		Fourth....	At seven and a half months, again in four weeks, when delivered; slight first time, but second very excessive.
59	Maxwell, S. C. ....	Dec. —, 1876	Mrs. T. ....		Fifth....	At six and a half months and delivered; fearful in amount.

PRES- SENTA- TION OF PLACENTA.	PRES- SEN- TATION OF CHILD.	TREATMENT.	RESULT TO MOTHER.	RESULT TO CHILD.	REMARKS.
Partial.....	Vertex...	First a tampon, until os well dilated; ergot; head coming down arrested all hemorrhage; labor soon terminated.	Recov....	Living	
Partial.....	Vertex...	Induced contraction by pressure on abdomen and dilatation of os with fingers; ruptured membranes; head came down, arresting all hemorrhage.	Recov....	Living	Examination of placenta showed membranes ruptured through placenta about two inches from margin.
Complete....	Vertex...	The child being dead, placenta almost separated, I removed it and then the child.	Recov....	Dead....	
Complete....	Head.....	Found os soft and dilatable; gave oil ergot; detached and removed placenta; pains good; the head soon entered the os, where it acted as an efficient plug.	Recov....	Dead....	
Partial.....	Head.....	Used ergot, which soon produced active pains, dilated the os, ruptured membranes, and brought head well down into os, when hemorrhage ceased.	Recov....	Dead....	On day previous had intense pain in one mamma, which was hot, tense, swollen to three or four times its ordinary size; high fever not preceded by chill; all left when hemorrhage occurred.
Partial.....	Vertex...	Resorted to podalic version, and delivered in a few minutes.	Recov....	Living	
Complete....	Head.....	Os being well dilated, proceeded to turn and deliver as rapidly as consistent.	Died.....	Dead....	Mother died in ten minutes; had virtually bled to death before I saw her.
Partial.....	Arm.....	Found os not dilated; I applied tampon, which stopped hemorrhage, but pains continued twelve or eighteen hours; removed tampon, os open, delivered by podalic version with great difficulty, contractions being so strong.	Died.....	Dead....	
Partial.....	Vertex...	When I arrived hemorrhage had been arrested by head pressing into os; stimulants and ergot.	Recov....	Living	
Partial.....	Vertex...	Delivered with forceps without delay; tonics and supporting treatment following delivery.	Died.....	Dead....	Mother died on third day.
Complete....	Vertex...	Hand introduced through center of placenta, ergot freely, and delivered at once by podalic version.	Recov....	Dead....	

NO. OF CASE.	NAME AND ADDRESS OF REPORTER.	DATE OF CONFINEMENT.	INITIALS OF PATIENT.	AGE.	NUMBER OF PREGNANCY.	TIME OF PREGNANCY WHEN HEMORRHAGE COMMENCED, WITH AMOUNT AND FREQUENCY OF RECURRENCE.
60	Mears, G. W., Indianapolis..	—, 1869				When seen was much exhausted from loss of blood; not an ounce lost after tampon applied.
61	Mears, G. W.	Mar. 10, 1872	J. S.	25	Second..	Soon after labor began; flooding excessive.
62	Mears, G. W.		C. K.	41	Seventh.	Slight hemorrhage for nearly a month before full term, when, however, it was alarming.
63	Mears, G. W.	Feb. 5, 1871.	S. A.	22	Mult....	Hemorrhage profuse, pulse weak and pains suspended.
64	Medcalf, A. F., Dale	July 26, 1876.	J. W.	38	Eleventh	Near the end of seventh month recurring every two weeks slight. At eight and a half months, alarming and continued more or less every day till full time.
65	Minesinger, H. M., Sulphur Springs	May 5, 1878.	M. B.	26	Fourth..	End of eighth month and every two weeks; slight at first, free and continuous at labor; pulseless, fainting, almost exsanguinated when I saw her.
66	Mitchell, J. D., Terre Haute	Jan. 10, 1858.	M.	36	Fourth..	About the seventh month; at beginning of labor profuse.
67	Mitchell, J. D.	Nov. 20, 1876	S.	26	Second..	At full term and first sign of labor, profuse.
68	Mitchell, J. S., Alfordsville..	Apr. 10, 1861	Mrs. M.	31	Fifth....	Full term; average three centiliters at each pain.

PRESENTATION OF PLACENTA.	PRESENTATION OF CHILD.	TREATMENT.	RESULT TO MOTHER.	RESULT TO CHILD.	REMARKS.
		Partial dilatation of os, the tampon (thoroughly packing vagina) applied and a T bandage; ergot administered; four hours after tampon, placenta and child were delivered.	Recov....	Living	In the practice of Dr. Bigelow, reported in "State Transactions," 1878, page 106.
	Head....	Applied tampon; forced away in four hours with placenta by head of child.	Recov....	Living	
Partial.....		Used endoscope and placed sponge saturated with per-sulph. iron upon the os, thoroughly packed vagina and applied T bandage; delivered in three hours.	Recov....	Living	In the practice of Dr. Newcomer, and reported in the "State Transactions" for 1878, page 107.
		Os very slightly dilated; tampon of cotton, saturated with per-sulph. iron, through speculum, and thoroughly packing vagina, upon this T bandage; eighteen hours after, all expelled without flooding.	Recov....	Living	In practice of Dr. Harvey, and reported in "State Transactions," 1878, page 107.
Partial.....	Vertex..	Tampon until os was fully dilated; ergot freely; hemorrhage ceased from pressure of head against the parts; delivery very quick after that.	Recov....	Living	
Partial.....	Vertex..	Gave ergot and wine; removed tampon of rags and cotton; drew off three and three-quarter pints urine; performed podalic version; womb contracted promptly.	Recov....	Living	I saw the patient after she had been in labor thirty-three hours; in charge of physio-medical friend, waiting for pains.
Partial.....	Vertex..	When first seen, hemorrhage slight; pains good; well advanced; expected termination soon, but labor pains ceased; hemorrhage profuse; delivery with forceps.	Died ....	Dead...	Mother died in one hour, from exhaustion.
Partial.....	Vertex..	Os dilated, introduced cotton plug saturated with per-sulph. iron against the os, and tamponed vagina; hemorrhage ceased; labor progressed rapidly; pushing all together.	Recov....	Living	
Complete....	Vertex..	Rest, horizontal position; ergot, alternated with plumb. acet., cold applications; turning was attempted but failed; placenta expelled two hours before case terminated.	Died undelivered.		Eight hours after labor began she died.

NO. OF CASE.	NAME AND ADDRESS OF REPORTER.	DATE OF CONFINEMENT.	INITIALS OF PATIENT.	AGE.	NUMBER OF PREGNANCY.	TIME OF PREGNANCY WHEN HEMORRHAGE COMMENCED, WITH AMOUNT AND FREQUENCY OF RECURRENCE.		
69	Parvin, Theo., Indianapolis.		Mrs. K.	First....		At seven months; quite copious; recurred occasionally and moderately during the succeeding two weeks, when another and larger flow took place; delivered soon afterwards.		
70	Province, W. M., Franklin...	June 29, 1878	S. E.....	23	Second...	At full term; profuse until placenta was expelled.		
71	Reynolds, J. H., Wirt.....	Dec. —, 1849	M. A. S.	40	Ninth....	Eight or ten days previous to nine full months, profuse.	Complete....	Natural...
72	Reynolds, J. H.....	May 10, 1857	M. Mc....	46	Sixt'nth.	Full period; profuse.	Complete....	Natural...
73	Reynolds, J. H.....	July 26, 1871	Mrs. H.	35	Seventh..	Within a week of full period; delivered in a few hours.	Complete....	Natural...
74	Rosenthal, I. M., Ft. Wayne	Sept. 6, 1870.	C. S.....	36	Third....	Seventh month; patient very feeble.	Complete....	Head.....
75	Rosenthal, I. M.....	Sept. 6, 1870.	I. H.....	40	Mult.....	Do not know.	Complete....	Head.....
76	Rosenthal, I. M.....	Nov. 30, 1871	P. K.....	38	Mult.....	Full term.	Partial.....	Head.....
77	Rosenthal, I. M.....	Dec. 5, 1872.	B. [R].....	21	First....	About seventh month and frequently thereafter; not profuse.	Partial.....	Head.....
78	Rosenthal, I. M.....	Apr. 27, 1873.	J. R. F....	30	Fourth....	Seventh month and several times thereafter; at full term profuse; prostration extreme.	Complete....	Head.....
79	Rosenthal, I. M.....	June 20, 1878	M. K.....	30	Fourth....	Profuse at seventh month, less at seven and a half, alarming at full term, apparently dying.	Complete....	Head .....
80	Schell, Isaac N., Frankton...	June 21, 1874	J. H.....	22	Second...	At the end of sixth month, recurred every ten or twenty days until term; moderately great hemorrhage.	Complete....	Head.....
81	Sloan, John, New Albany....	—, 1846.....	Mrs. G....	23	Second...	Eight months and delivered; hemorrhage profuse.	Complete....	Vertex...
82	Sloan, John.....	June 25, 1869	J. B.....	35	Mult.....	Often and severe during the sixth and seventh month.	Complete....	Head.....

PRESENTATION OF PLACENTA.	PRESENTATION OF CHILD.	TREATMENT.	RESULT TO MOTHER.	RESULT TO CHILD.	REMARKS.
Complete....	Vertex...	Induction of premature delivery at seven and a half months; dilatation of os effected by Molesworth's dilators to five centimeters in diameter in three hours, when regular uterine contractions occurred; ruptured membranes; in two and a half hours head well down; completed labor with forceps.	Recov....	Living	A battledore placenta and measuring twenty-seven centimeters one direction and twelve and a half transversely. Reported in "Am. Practitioner," March, 1875, vol. XI, page 150.
Complete....	Shoulder	After the afterbirth was removed, the child was delivered by turning by the feet.	Recov....	Dead...	
Complete....	Natural..	Administered strong whisky toddy and without hesitation pushed aside the presenting placenta, turned the child and delivered promptly. This was the treatment in all three cases.	Recov....	Living	
Complete....	Natural..		Recov....	Living	
Complete....	Head.....	Podalic version and delivery at seventh month.	Recov....	Dead ...	
Complete....	Head.....	None; was seen by a physician forty-eight hours previously, who advised patience.	Died....	Dead ...	Mother died before my arrival; delivered after death.
Partial.....	Head.....	Tampon; child expelled in twelve hours.	Recov....	Living	Child died two days afterwards, of deformities.
Partial.....	Head.....	Rest; mur. tintet. iron, acid drinks, etc.	Recov....	Dead...	Funis prolapsed.
Complete....	Head.....	Earlier hemorrhages arrested by tampon; at labor os fully dilated; gave brandy; delivered by podalic version.	Recov....	Living	
Complete....	Head .....	Called thirty-six hours after labor commenced; attempted version, almost proved fatal; after brandy four hours, gave ether, turned and delivered.	Recov....	Dead ...	
Complete....	Head.....	Detached the placenta and delivered with forceps; no hemorrhage after separation of placenta.	Recov....	Living	Child died second day after birth, of convulsions.
Complete....	Vertex...	Separated placenta at side, ruptured membranes; delivered in less than thirty minutes.	Recov....	Living	
Complete....	Head.....	Induction of premature delivery near end of seventh month; dilatation of os by fingers; under anesthesia turned and delivered.	Recov....	Living	

NO. OF CASE.	NAME AND ADDRESS OF REPORTER.	DATE OF CONFINEMENT.	INITIALS OF PATIENT.	AGE.	NUMBER OF PREGNANCY.	TIME OF PREGNANCY WHEN HEMORRHAGE COMMENCED, WITH AMOUNT AND FREQUENCY OF RECURRENT.
						TIME OF PREGNANCY WHEN HEMORRHAGE COMMENCED, WITH AMOUNT AND FREQUENCY OF RECURRENT.
83	Stevenson, G. A., Rising Sun	—, 1870.	P. B.	42	Ninth....	Full term.
84	Sutton, George, Aurora	.....	Mrs. B.	40	Sixth....	.....
85	Sutton, George	.....	R. S.	37	Fifth....	Flooding profusely; pulse small and feeble; much exhausted.
86	Sutton, George	.....	Mrs. A.	37	Fifth....	Several weeks previous to full term; at term profuse.
87	Sutton, George	Sept. 5, 1867.	Mrs. B.	30	Second....	Found the woman with hemorrhage profuse and alarming; no pains, pale and exhausted.
88	Sutton, George	Nov. —, 1877.	Mrs. N.	28	First....	About one week previous to delivery; lost considerable blood.
89	Sutton, George	June —, 1862	J. A.	....	Second....	Had sudden, frequent and alarming hemorrhages for past two months.
90	Sutton, George	.....	.....	.....	.....	At the time of labor there was severe hemorrhage.
91	Sutton, George	July 15, 1865.	Mrs. H.	....	Fifth....	Found her greatly exhausted and repeated syncope.
92	Sutton, George	Oct. 28, —	Mrs. L.	30	Third....	Slight attacks at close of eighth month; within a few days of full term flooding considerable.
93	Sutton, George	Dec. 21, 1863.	J. O.	....	Mult....	At sixth or seventh month and at intervals until full term, when free and profuse.
94	Sutton, George	Mar. 6, —	Mrs. V.	30	Third....	Few days before delivery and severe.

PRESENTATION OF PLACENTA.	PRESENTATION OF CHILD.	TREATMENT.	RESULT TO MOTHER.	RESULT TO CHILD.	REMARKS.
Complete....	Head....	Turned the child and delivered.	Died....	Dead....	For several years had severe chronic pulmonary disease.
.....	.....	Found the os slightly dilated, but rigid; applied tampon; in thirteen hours stronger pains came on, forcing away tampon and a large amount of coagulated blood; she sank rapidly.	Died undelivered.	.....	In consultation with Dr. A. B. Haines. The following thirteen cases are reported in "State Transactions" for 1878, pages 121-128.
Complete....	.....	Os soft and dilatable; fingers between placenta and uterus ruptured membranes, and version easily effected; hemorrhage ceased when hips passed os.	Recov....	Living	
Complete....	.....	Os dilated to about size of quarter dollar, firm and rigid; dilated os with fingers and conical tampon; passed hand, ruptured membranes and brought down feet; with hips in cervix, hemorrhage ceased.	Recov....	Living	
Partial.....	.....	Os more than half dilated; no difficulty in turning and bringing down feet, when hemorrhage ceased.	Recov....	Dead...	In consultation with Dr. Joseph Lamb.
Partial.....	Head....	Os soft and dilatable; ruptured membranes and head came down, arresting hemorrhage; delivered in twelve hours.	Recov....	Living	
Complete....	.....	Perforated placenta, introduced hand, turned and brought down the feet.	Recov....	Living	In the practice of Dr. C. B. Miller.
Partial.....	Shoulder	Succeeded in turning and bringing down the feet.	Recov....	Living	
Complete....	.....	Os sufficiently dilated to introduce hand, perforate placenta and speedily terminate delivery by the feet.	Died....	Dead...	Mother died in thirty minutes from slight post partum hemorrhage. In practice of Dr. M. Harding.
Complete....	.....	Os very slightly dilated, firm and rigid, pains weak; used tampon; flooding ceased six hours, returned profusely; tampon again; three hours afterward turned and delivered.	Died....	Dead...	Mother died "very shortly afterwards." In practice of Dr. A. B. Haines.
Complete....	.....	Os quite well dilated; fingers in os detaching placenta brought on pains, delivery soon followed; but little hemorrhage.	Died....	.....	In practice of Dr. R. C. Bond; mother died in four or five days—never rallied.
Complete....	Head....	Os slightly dilated; without much resistance performed podalic version.	Recov....	Dead...	In practice of Dr. T. M. Kyle.

NO. OF CASE.	NAME AND ADDRESS OF REPORTER.	DATE OF CONFINEMENT.	INITIALS OF PATIENT.	NUMBER OF PREGNANCY.	TIME OF PREGNANCY WHEN HEMORRHAGE COMMENCED, WITH AMOUNT AND FREQUENCY OF RECURRENCE.
95	Sutton, George.....	Jan. 8, 1870..	Mrs. S... 34	Fifth.....	In seventh month; moderately profuse; at full term very profuse.
96	Sutton, George.....	Nov. 13, 1876	N. R.... 30	Third....	At full term; had been in very ill health for three months; not much hemorrhage, external previous to and but slight during labor, but she seemed to gradually sink from the first.
97	Thomas, Mary F., Richmond	July 9, 1877..	E. H..... 23	First.....	About beginning of ninth month, returned every week; three days before labor very profuse.
98	Thompson, J. J., Sullivan....	May —, 1858.	J. M..... 23	First.....	At completion of eighth month; flooding badly fourteen hours before I was called; found her <i>in articulo mortis</i> .
99	Thompson, J. J.....	Mar. 28, 1865.	M. M.... 32	Sixth....	Something over eight months, again in seven days, and in three days, every time profuse.
100	Tilford, Salem A., Martinsville .....	Jan. 24, 1877.	Mrs. P... 30	Fourth....	About eight months; every two or three days, for three weeks, when delivered; not excessive until last.
101	Van Vorhis, F. J., Indianapolis.....	—, 1873....	L. W.....	Third....	More or less at intervals during pregnancy; had called nophysician; blood running in a torrent when I saw her.
102	Walker, G. B., Evansville....	Feb. 4, 1853..	M. R..... 40	Mult.....	For two or three months; not alarming until now.
103	Walker, G. B.....	July 5, 1853..	German. 43	.....	In beginning of ninth month, with considerable flooding; delivered at that time.
104	Walker, G. B.....	Aug. —, 1854	German. 45	.....	At eight and a half months; under the care of an ignorant midwife four days; lost a large quantity of blood; appeared almost bloodless; <i>in articulo mortis</i> ; uterine contractions feeble.
105	Walker, G. B.....	Sept. 9, 1863..	Mrs. S... 26	Third....	Frequent floodings during the last two months, and lost a great deal during labor.

PRES- SENTA- TION OF PLACENTA.	PRES- SENTA- TION OF CHILD.	TREATMENT.	RESULT TO MOTHER.	RESULT TO CHILD.	REMARKS.
Complete....	.....	Os well dilated; introduced hand and brought breech into pelvis, when the blood ceased to flow.	Recov....	Dead...	In practice of Dr. H. C. Vincent.
Complete....	.....	Slight dilatation of os; unwilling for six hours (efforts to introduce hand fruitless), when there was sudden relaxation and softening of os; immediately ruptured placenta, turned and delivered; when cavity of uterus reached, found a large amount of clotted blood.	Died .....	.....	In practice of Dr. F. M. Pollett; mother died in a few moments after delivery.
Complete....	Head.....	Dilated the os; introduced hand and brought down feet; delivered with difficulty, pelvis being small; stimulants, restoratives and ergot.	Recov....	Dead...	
Complete....	Vertex...	Had taken "medicine that never failed to stop flooding," and "was bled freely by the so-called doctor in charge."	Died un- deliv- ered.	.....	
Complete....	Head.....	Os dilated; proceeded to turn and deliver; did well until third day: violent chill, high fever, grew worse until ninth day.	Died .....	Dead...	In this vicinity that year all diseases were of an extremely malignant type.
Complete....	.....	Os soft and dilatable; hand passed through placenta; delivered by the feet.	Recov....	Dead...	Alarming post partum hemorrhage until placenta delivered.
Complete....	Vertex...	Without hesitation inserted hand, turned and delivered.	Died .....	Dead...	Mother died in one week from asthenia.
Complete....	Head.....	Os open but rigid; introduced hand, seized foot and delivery completed within thirty minutes.	Recov....	Dead...	These six cases of Dr. Walker's were reported in a paper, "Observations in Practice, Surgery, Gynecology and especially Obstetrics," read before the Ind., Ills. and Ky. Tri-State Med. Society, in Evansville, October 17, 1877.
Complete....	.....	Os dilated and relaxed; without difficulty hand entered, foot seized and delivery completed.	Recov....	Living.	
Complete....	.....	Hand introduced, placenta disturbed as little as possible, feet secured and brought down; delivered within ten minutes.	Died .....	Dead...	Mother died two days after delivery; never rallied; child had been dead some days.
Complete....	.....	Ergot, followed by slight labor pains; eighteen hours afterwards delivered by podalic version without difficulty, and but little hemorrhage.	Died .....	Dead...	Mother died from exhaustion two hours after delivery.

NO. OF CASE.	NAME AND ADDRESS OF REPORTER.	DATE OF CONFINEMENT.	INITIALS OF PATIENT.	NUMBER OF PREGNANCY.	TIME OF PREGNANCY WHEN HEMORRHAGE COMMENCED, WITH AMOUNT AND FREQUENCY OF RECURRENCE.
					AGE.
106	Walker, G. B.....	Apr. 12, 1865	Mc. K....	37	Mult..... At six and a half month and moderately for a few days, when delivered.
107	Walker, G. B.....	May 26, 1872	Mrs. G....	30	Third..... Repeated floodings for month; was considerably exhausted and feverish.
108	Walters, R. D., Leipsic.....	—, 1849.....	Mrs. L....	25	Fourth.... About eighth month; great hemorrhage at every pain.
109	Waterman, L. D., Indianapolis.....	May 29, 1876.	F. J. H....	.....	About close of seventh month; slight, recurring every six or eight days, until close of eighth month, when delivered.
110	Weever, J. B., Mt. Vernon...	Sept. 18, 1878	Mrs. B....	20	First..... Between six and seven months; quite freely, recurring often for nine days, when delivered.
111	Weddington, S. C., Jonesboro	Apr. 15, 1876.	Mrs. W....	34	Fifth..... About eight months; recurred once a week; delivered at eight and half months; hemorrhage profuse.
112	Weist, J. R., Richmond.....	Apr. 15, 1878.	C. T.....	22	First..... At end of sixth month freely recurred every few days until delivered at end of seventh, when there was most dangerous hemorrhage.
1	Cook, Ward, Pendleton.....	May 2, 1870...	A. C.....	30	Third.... About the seventh month and every two or three weeks; moderate.

PRES- ENTA- TION OF PLACENTA.	PRESEN- TA- TION OF CHILD.	TREATMENT.	RESULT TO MOTHER.	RESULT TO CHILD.	REMARKS.
Complete....		Hand passed through cervix after overcoming considerable resistance, seized the feet and delivered.	Recov....	Living	Child died after a short period.
Complete....		Os open to size of a silver dollar, and soft; hand passed by moderate pressure; foot seized and delivery completed.	Recov....	Living	
Complete....	Face.....	Hastened delivery, and used quinine and ergot.	Recov....	Dead ...	
Complete....	Vertex...	For seven days used tannin on cotton tampon to cervix; quietude; morph. and ergot in small doses; delivered while slightly narcotized, while I was temporarily absent.	Recov....	Died....	Child gasped, but further contractions expelling placenta, child was not restorable when I arrived thirty minutes after birth.
Complete....	Footling	Three days prior to delivery, applied tampon with sub. sulp. iron; when os fully dilated peeled placenta from attachments and delivered child to hips, when all hemorrhage ceased.	Recov....	Dead ...	
Partial.....	Vertex...	Os but little dilated; gave ergot and used tampon two hours; hemorrhage increasing, introduced hand, turned and delivered.	Recov....	Living	Reported in "State Transactions" for 1877, page 119.
Complete....	Vertex...	Tampon arrested hemorrhage five hours; again applied three hours; os dilatable; introduced hand, separating placentas; delivered by feet.	Recov...	Dead ...	
Partial.....	Vertex...	Pains trifling and labor slow; as os dilated hemorrhage increased; tampon thro' speculum, after the manner of Dr. Mears, which checked hemorrhage; head got in the excavation; there was no further flow.	Recov....	Living	After persevering in artificial respiration, etc. "After placenta extracted, it was easy to see the edge that presented over the os uteri."

(1) This report was received after I had made up the principal part of my paper, hence could not include it where it belongs—in the tampon cases.

In order to have ascertained, even approximately, the frequency of occurrence of placenta previa, I might have requested in my circular a statement of the number of cases of obstetrics attended, and thus ascertained the proportion of cases in which the placenta was implanted over the os uteri, but after considering that very few physicians keep any record of their obstetrical practice, and those who did not would reasonably estimate their experience to be larger than it actually had been, my statistics would be fallacious on that point.

I have received reports of several cases in which abortion occurred, earlier than the seventh month, but as they had no practical bearing on the statistics, I have omitted them. Several physicians mention having met with cases of partial presentation, but as they were not serious and did not require any special treatment, they have omitted to report them, unfortunately, because nature should be our guide, and we may have learned a lesson from them.

We will now take up the study of these cases in the aggregate, and see how well they compare with other published tables and also what inference we may draw from them.

Age. In this table we have the age reported in eighty-three cases, as follows:

AGE.	NO. OF CASES.	PER CENT.
Under 20 years.....	2	2.41
From 21 to 25 inclusive.....	17	20.48
From 26 to 30 inclusive.....	18	21.69
From 31 to 35 inclusive.....	17	20.48
From 36 to 40 inclusive.....	19	22.89
From 41 to 45 inclusive.....	9	10.84
From 46 to 50 inclusive.....	1	1.21
	83	100.00

The above substantially agrees with the statistics of Trask, who found more cases occurring at the age of forty years; and

for the ages from thirty-six to forty inclusive, his collection gives 26.23 per cent. of all in which the age was given.

The pregnancy at which the placenta was previa, occurred as follows:

	NO. OF CASES.	PER CENT.
First pregnancy.....	9	9.89
Second pregnancy .....	17	18.68
Third pregnancy.....	14	15.39
Fourth pregnancy.....	12	13.19
Fifth pregnancy .....	13	14.29
Sixth pregnancy .....	9	9.89
Seventh pregnancy.....	8	8.78
Eighth pregnancy.....	2	2.20
Ninth pregnancy .....	3	3.29
Eleventh pregnancy.....	2	2.20
Twelfth pregnancy.....	1	1.10
Sixteenth pregnancy.....	1	1.10
	91	100.00

In Simpson's table a larger number of cases occurred in the third pregnancy (15.38 per cent.); while in Trask's collection 19.75 per cent. occurred in the second, which is near the same proportion as in this table. Playfair,<sup>1</sup> in speaking of the causes of placenta previa, remarks that it "more generally occurs in women who have borne several children." This is not in accord with the statistics above referred to, and hence, to some extent, invalidates his theory as to the cause of placenta previa.

The time of pregnancy when hemorrhage commenced:

(1) *Syst. of Midwifery*, 1st ed., page 359.

	NO. OF CASES.	PER CENT.
Before sixth month .....	3	3.57
During sixth month .....	7	8.33
During seventh month .....	27	32.14
During eighth month.....	13	15.48
During ninth month .....	19	22.62
At full term .....	15	17.86
	84	100.00

No table to which I have access has considered this question statistically; but most all writers agree that hemorrhage will occur in a majority of the cases before full term. Burns<sup>1</sup> says, "in the end of the seventh month and course of the eighth, though sometimes not till near the usual termination of labor." Rigby<sup>2</sup> says, "although in by far the majority of these cases it does not come on until the last four or six weeks, it now and then occurs at a much earlier period," and refers to a case in which hemorrhage came on "when the patient was about three months gone with child." Cases fifty, fifty-five and one hundred and one are similar. Barnes<sup>3</sup> claims that "at any time during the course of pregnancy hemorrhage from this cause is apt to take place, and after the fifth month the woman may be overtaken without warning by a smart flooding." The cases given in this collection show that after the sixth month the danger is imminent at any moment, and there is no immunity from hemorrhage prior to that time, many cases of abortion perhaps being due to the mal-presentation of the placenta not recognized. I have received reports of several cases in which miscarriage resulted from the placenta being over the os internum—reports not included in this table for reasons heretofore given.

If the hemorrhage in placenta previa is thus liable to occur at any time during the course of pregnancy, does it not invalidate many of the theories as to the cause of the hemorrhage? It is generally admitted that the hemorrhage is a result of separa-

(1) Princip. of Mid., page 169.  
(2) Syst. of Mid., page 405.

(3) Obstetric Operations, page 369.

tion of the placenta from the uterine walls; but what causes that separation is what we wish to inquire. Churchill<sup>1</sup> says, "it is the necessary consequence of the dilatation of the os uteri by which the connection between the placenta and uterus is separated," which is consistent with another statement that the first discharge is usually about three weeks before labor commences;<sup>2</sup> but neither statement accords with the facts shown in this table, and the inference that we might justly draw from other statistical collections, that the hemorrhage is more liable to come on at seven months and may appear at any time during utero-gestation.

The theory of Jacquemier, which has been accepted by Cazeaux and others, maintains that "during the first six months of utero-gestation, the superior portion of the uterus is more especially developed," and that "during the last three months of pregnancy the lower segment of the uterus develops more than the upper while the placenta remains nearly stationary in size, the inevitable result being a loss of proportion between the cervix and placenta and detachment of the latter."<sup>3</sup> Barnes<sup>4</sup> gives a theory that the hemorrhage "arises from an excess in rate of growth of the placenta over that of the cervix, hence loss of relation." But these theories are also defective; as Playfair says,<sup>5</sup> they are not "readily reconcilable with the fact that hemorrhage frequently does not begin until labor has commenced at term." In this collection 17.86 per cent. of the cases are reported as hemorrhage commencing at full term, while it is presumable that many of the cases in which this point is not stated were at or near full period. After considering the causes as explained by various writers, Playfair says,<sup>6</sup> "Uterine contractions are constantly occurring during the continuance of pregnancy. This has been conclusively shown by Braxton Hicks, and any one can readily ascertain the fact by keeping his hand for a few minutes on a pregnant uterus. There is no reason to suppose that these contractions do not affect the cervical as well as the fundal portions of the uterus, and it is

(1) Syst. of Mid., page 436.

(4) *Obstetric Operations*, page 358.

(2) Syst. of Mid., page 437.

(5) Syst. of Mid., page 362.

(3) Playfair's Syst. of Mid., page 362.

(6) Syst. of Mid., page 363.

fifty, about one-third of the placenta presenting that appearance.

Presentation of the child was reported in eighty-five cases, as follows:

PRESENTATION.	NO. OF CASES.	PER CENT.
Head, including face.....	76	89.41
Breech, including footling.....	3	3.53
Shoulder, arm and other cross.....	6	7.06
	85	100.00

To compare those with Trask's or Simpson's table, we find a much larger per cent. of our cases are vertex presentations, than the per cent. in either of theirs. This may be explained, and I think reasonably, upon this supposition, that in the published cases, as in Simpson's or Trask's tables, any other than a head presentation would be mentioned, while that would not always be specified.

To analyze the treatment that is mentioned by the reporters and ascertain what was the principal remedy or method adopted, and relied upon because of the position of the placenta over the os uteri, and to arrive at just conclusions as to the value of each remedial agency, is a difficult task. To do so, and to facilitate our study of them, I have classified them in such a manner as to show what was the principal remedy or method adopted, the circumstances in each case which would have the greatest influence upon the results, and the measures that were made use of which might be considered as auxiliary treatment.

Circumstances of the cases virtually left to nature, or in which there was no treatment:

No. OF CASE.	WHEN DELIVERED.	TIME FROM FIRST HEMORRHAGE UNTIL DELIVERY.	CHARACTER OF HEMORRHAGE.	PLACENTAL PRESENTATION.	ALMILLARY TREATMENT.	RESULT TO MOTHER.	RESULT TO CHILD.
						CHARACTER OF HEMORRHAGE.	PLACENTAL PRESENTATION.
11	8 months.	Two weeks.	Moderate.	Partial.	Recovered.	Living.	
27	8½ months.	Thirty hours.	Small.	Partial.	Recovered.	Living.	
34	Term.	Six weeks.	Moderate.	Complete.	Recovered.	Dead; prolapsed cord.	
75				Complete.	Died.	Dead; delivered; post-mortem.	
77		Seventh month.	Moderate.	Partial.	Recovered.	Dead; prolapsed cord.	
93	Term.	Three months.	Profuse.	Complete.	Died.		
98	8 months.	Fourteen hours.	Profuse.	Complete.	Died undeliver'd.		

Seven cases, four mothers recovering and three dying; two children living, four dead and one the result not stated.

The mortality in these cases, to both mother and child, is much heavier than the average mortality in placenta previa under all circumstances. The fatality to the mother was undoubtedly due in every case to the position of the placenta and attending hemorrhage. In cases thirty-four and seventy-seven, the children may have died from the circulation being stopped by the prolapsus of the cord; but in the other fatal cases we can discover no other cause than the hemorrhage. In case eleven, the child is reported as having lived only a few hours; thus leaving only one child surviving out of the seven cases, a mortality that is too discouraging to ever allow us to leave a case of placenta previa to nature alone, unless very closely watched and ready to give assistance when required.

Cases in which ergot was the principal remedy used:

No. OF CASE.	WHEN DELIVERED.	TIME FROM FIRST HEMORRHAGE UNTIL DELIVERY.	CHARACTER OF HEMORRHAGE.	PLACENTAL PRESENTATION.	ALMILLARY TREATMENT.	RESULT TO MOTHER.	RESULT TO CHILD.
						CHARACTER OF HEMORRHAGE.	PLACENTAL PRESENTATION.
6	8½ mos.	24 hours.	Profuse.	Complete.	Ruptured Membranes	Recovered.	Dead.
7	28 weeks.	At once.	Profuse.	Partial.		Recovered.	Dead.
14	Term.	2 months.	Profuse.	Complete.	Forceps.	Died.	Dead.

NO. OF CASE.	WHEN DELIVERED.	TIME FROM FIRST HEMORRHAGE UNTIL DELIVERY.	CHARACTER OF HEMORRHAGE.	PLACENTAL PRESENTATION.	AUXILIARY TREATMENT.	RESULT TO MOTHER.	RESULT TO CHILD.
36	Term.....	At once.....	Profuse...	Complete.....		Died.....	Dead.
41	Term.....	2 weeks....	Profuse...		Tampon, etc.	Died undelivered...	
48	Term.....	2 months...	Profuse...	Complete...	Cold, styp- tics, etc....	Died undelivered...	
53	6 $\frac{1}{2}$ mos....	1 day.....	Profuse...	Partial.....	Ruptured Membranes	Recovered.....	Dead.
57	Term.....	24 days....	Moderate	Partial.....	Stimulants...	Recovered.....	Living.
108	7 $\frac{1}{2}$ mos....	At once.....	Moderate	Complete.....		Recovered.....	Dead.

Nine cases, five mothers recovering and four dying; one child living, six dead and two unborn; presenting a mortality to both mother and child far above the average. There is nothing in the reports of these cases to explain the mortality, other than the presentation of the placenta and the hemorrhage. In cases forty-four and forty-eight, the reporters speak of such rigidity of the os and other conditions that precluded the possibility of version or any other method of rapid delivery. Case seven, delivery occurred at an age early for viability of child.

It seems that the object in giving ergot in those cases was to secure more efficient contraction of the uterus. Trask quotes Ramsbotham as advising it, and especially in prostration and before proceeding to turn, and Murphy as saying that with a stimulant, as opium, it is good in preventing such hemorrhages; but in none of those cases was there great prostration reported, except in the two cases that died undelivered. Trask says that Dr. Fountain, of New York, informs him that in his practice he had met with two cases in which the os uteri was so firm, thick and unyielding that he deemed it not best to introduce the hand, but arrest the flooding till the os was in a more favorable condition. To secure a constant pressure on the placenta and thereby stop the flow mechanically, he gave a full dose of ergot and repeated it until the os was dilated and turning resorted to successfully in both cases.<sup>1</sup> In cases forty-

(1) Trask's Essay, Trans. Am. Med. Ass., 1855, page 651.

four and forty-eight ergot was used as indicated by Dr. Fountain's experience, but not with such a fortunate termination.

From the experience as reported in this collection, one would conclude that not much good could be expected from ergot, in cases of placenta previa, other than in a natural labor deficient in action.

Cases in which rupture of the membranes formed the principal reliance:

NO. OF CASE.	WHEN DELIVERED.	TIME FROM FIRST HEMORRHAGE UNTIL DELIVERY.	CHARACTER OF HEMORRHAGE.	PLACENTAL PRESENTATION.	AUXILIARY TREATMENT.	RESULT TO MOTHER.	RESULT TO CHILD.
31	Term .....	3 weeks .....	Moderate	Complete...	Ergot, etc.....	Recovered.....	Living.
49	.....	.....	.....	Partial .....	.....	Recovered.....	Living.
41	.....	.....	.....	Partial .....	.....	Recovered.....	Living.
43	Term .....	1 month....	Profuse ..	Partial .....	Ergot, etc.....	Recovered.....	Living.
50	Term .....	Entire pregnancy	Moderate	Partial .....	.....	Recovered.....	Living.
81	8 months..	At once.....	Profuse ..	Complete...	.....	Recovered.....	Living.
88	.....	1 week .....	Moderate	Partial .....	.....	Recovered.....	Living.

Seven cases, none proving fatal to either mother or child.

Rupture of the membranes was first advised by Mariceau, or Puzos, as a means of assisting in the evacuation of the uterus in placenta previa. The method of Puzos consisted, as given by Miller,<sup>1</sup> in the introduction of "one or two fingers within the os uteri, which is to be gradually opened by the employment of force proportioned to its resistance. \* \* \* \* By this means the uterus is roused to action, labor pains come on and the membranes are rendered tense. The next object is to rupture the membranes without delay." From the reports in the above seven cases, such appears to have been the practice followed, and not the recommendation of Barnes,<sup>2</sup> that "the puncture of the membranes is the *first* thing to be done in all cases of flooding sufficient to cause anxiety before labor," or of Playfair in recommending it and depending upon *subsequent* dilatation of the os.

(1) Miller's Obstetrics, page 260.

(2) Obstetric Operations, page 376.

The results in those seven cases are indeed encouraging, but the treatment alone would not be sufficient to give such a favorable result in every case of placenta previa, and I think we can safely explain the happy results here, in part, at least, by applying to them the statement made by Trask in regard to another class of cases, viz., that "as a class they are characterized by a tonicity of the womb and a vigor of uterine contraction which we do not find in ordinary cases of the accident."<sup>1</sup>

Cases in which the entire detachment of the placenta was the principal treatment adopted:

NO. OF CASE.	WHEN DELIVERED.	TIME FROM FIRST HEMORRHAGE UNTIL DELIVERY.	CHARACTER OF HEMORRHAGE.	PLACENTAL PRESENTATION.	AUXILIARY TREATMENT.	RESULT TO MOTHER.	RESULT TO CHILD.
5	Term .....	1 month....	Profuse ..	Complete...	Instruments..	Recovered.....	Dead.
8	30 weeks ..	1 week ....	Profuse ..	Complete...	Ergot.....	Recovered.....	Dead.
9	7 months..	3 days.....	Moderate	Complete...	Ergot.....	Recovered.....	Dead.
17	.....	.....	.....	Complete...	.....	Died undelivered...	
30	.....	At labor ..	Profuse ..	Complete...	Ergot.....	Recovered.....	Dead.
47	Term .....	At labor ..	Moderate	Complete...	Ergot.....	Recovered.....	Living.
51	Term .....	15 hours ...	Profuse ..	Complete...	.....	Recovered.....	Dead.
52	9 months..	5 weeks ..	Profuse ..	Complete...	Oil Erigeron.	Recovered.....	Dead.
68	Term .....	At labor ..	Profuse ..	Complete...	Ergot, etc.....	Died undelivered...	
80	Term .....	3 months...	Moderate	Complete...	Forceps.....	Recovered.....	Living.
110	7 months..	9 days.....	Moderate	Complete...	Tampon.....	Recovered.....	Dead.

Eleven cases, nine mothers recovering and two dying undelivered; two children living and nine dead.

Simpson was the first to emphatically call attention to the entire detachment of the placenta as a method of treatment in cases of placenta previa, but it was only under certain circumstances or conditions that he advised its performance, which may be thus briefly epitomized: When the child is dead or not viable; when turning can not be easily accomplished because of rigidity of the os uteri, or a firmly contracted uterus; the pelvic passages too small or the mother too much exhausted. He was first led to this treatment by observing that the placenta

(1) Trask's Essay, Trans. Am. Med. Ass., page 663.

was sometimes spontaneously expelled before delivery of the child.

From the reports of cases seventeen, forty-seven, fifty-one and sixty-eight, the placenta in these cases was expelled spontaneously. Cases five, thirty and eighty come under one or the other of the conditions above specified. In cases eight and nine, the remarks of the reporter, as given in the tabulated report opposite the cases, are sufficiently clear and comprehensive.

In cases thirty-five, forty-five and seventy, the placenta was delivered before the child, but they are classed in other tables.

Taking into consideration the circumstances of these cases, the mortality as regards the mother, though not so light as Simpson's paper would show, yet, is not so high as the average mortality in placenta previa, and but little heavier as regards the child, than Simpson's collection. In six of the cases all hemorrhage is noted as having ceased after entire detachment of the placenta.

Cases in which the forceps were used as the principal reliance:

NO. OF CASE.	WHEN DELIVERED.	TIME FROM FIRST HEMORRHAGE UNTIL DELIVERY.	CHARACTER OF HEMORRHAGE.	PLACENTAL PRESENTATION.	AMULINARY TREATMENT.	RESULT TO MOTHER.	RESULT TO CHILD.
21 .....	.....	.....	Small....	Partial .....	.....	Recovered.....	Living.
58 .....	$8\frac{1}{2}$ mos.	4 weeks....	Moder'e.	Partial.....	.....	Died.....	Dead.
66 Term .....	6 or 8 wks.	Profuse..	Partial.....	.....	.....	Died.....	Dead.

Three cases, one mother recovering and two dying: one child living and two dead.

The forceps are not often recommended in placenta previa, for obvious reasons, unless some other character of dystocia is complicating the case. In the small experience given in this collection, the results, as shown above, are not very encouraging, especially if we examine closely the report of the only

favorable case; and were we to examine all the cases in this table in which the forceps were used as an auxiliary measure of treatment, the mortality to both mother and child has been above the average.

Craniotomy is reported as having been resorted to in case twenty-three, after failure of the tampon to secure arrest of the hemorrhage, and the circumstances of the case showing "necessity for immediate action." The mother recovered.

Cases in which the tampon appears to have been the principal reliance:

NO. OF CASE.	WHEN DELIVERED.	TIME FROM FIRST HEMORRHAGE UNTIL DELIVERY.	CHARACTER OF HEMORRHAGE.	PLACENTAL PRESENTATION.	AUXILIARY TREATMENT.	RESULT TO MOTHER.	RESULT TO CHILD.
15	8 $\frac{1}{2}$ mos.	2 days.....	Profuse...	Partial.....	Rup. mem. dil. of os and forceps.....	Recovered.....	Dead.
18	Term .....	At once.....	.....	Partial.....	Rup. memb. ....	Recovered.....	Dead.
19	Term .....	10 days.....	.....	Partial.....	.....	Recovered.....	Dead.
26	8 $\frac{1}{2}$ mos.	6 weeks.....	Profuse...	Complete...	Ergot.....	Died.....	Dead.
35	.....	1 month....	Moderate	Complete...	Del. of plac. and forceps.	Recovered.....	Living.
49	.....	3 days.....	Moderate	Partial.....	Ergot.....	Recovered.....	Living.
60	.....	.....	.....	.....	.....	Recovered.....	Living.
61	.....	Short time	Profuse...	.....	.....	Recovered.....	Living.
62	.....	1 month....	Profuse...	Partial.....	Iron on tampon.....	Recovered.....	Living.
63	.....	.....	Profuse...	.....	Iron on tampon.....	Recovered.....	Living.
64	Term.....	2 months...	Profuse...	Partial.....	Ergot.....	Recovered.....	Living.
67	Term.....	At labor....	Profuse ..	Partial.....	Iron on tampon.....	Recovered.....	Living.
76	Term.....	.....	.....	Partial....	.....	Recovered.....	Living.
84	.....	.....	.....	.....	Tannin on tampon and ergot.....	Died undelivered ..	.....
109	8 mos.....	1 month....	Small....	Complete...	.....	Recovered.....	Dead.

Fifteen cases, thirteen mothers recovering and two dying—one undelivered; nine children living and six dead.

The original intention of Leroux, who first advised the use of the plug or tampon in placenta previa, is thus given in "Rigby's System of Midwifery":<sup>1</sup> "If after the commencement of a

flooding, we favor the formation of a coagulum by means of a plug, are we not aiding nature?" It was not with the expectation of the tampon forming a coagulum in the vagina or cervix, as was the idea of Leroux, that it was used by the reporters in this collection, but that it should act mechanically and the cervix or vagina be completely plugged and packed, and thus restrain the hemorrhage until the os dilated or delivery was completed.

Barnes says<sup>1</sup> that after puncturing the membranes, if hemorrhage continues, "the os uteri being undilated the plug may be tried," and Playfair says,<sup>2</sup> after the evacuation of the liquor amnii it may be "specially serviceable." In nine of those cases it is specified that the tampon was applied before dilatation of the os and rupture of the membranes, and it is probable the same practice was followed in the other five cases. In one case only was the os uteri mentioned as being dilated when the tampon was applied, and in that there was strong uterine contractions and delivery speedily terminated.

In six of the cases the hemorrhage is reported as being small after the application of the tampon.

The mortality in those fifteen cases is less than the average to both mother and child, but is this lessened mortality to be altogether ascribed to the treatment pursued? The presentation of the placenta is noted in eleven cases—three as complete and eight partial. Less than half of the cases are noted as having had profuse hemorrhage, and in only two cases is the hemorrhage spoken of as having occurred more than a month prior to delivery, presenting, in these respects, conditions favorable, regardless of treatment. May not the remark of Trask, which we have applied to one class of cases, be to some extent also applicable to this?

The tampon to be effective should be correctly applied, and its failure in many instances might consistently be ascribed to its imperfect application. The method reported in cases sixty, sixty-one, sixty-two and sixty-three is worthy of attention and the success attending it encouraging.

Cases in which version was the principal treatment adopted:

(1) *Obstetric Operations*, page 376.

(2) *System of Midwifery*, page 366.

NO. OF CASE.	NO. OF PREGNANCY.	TIME FROM FIRST DELIVERY WHEN HEMORRHAGE OCCURRED.	CHARACTER OF HEMORRHAGE.	PLAQUE-FIXED PRESENTATION.	AUXILIARY TREATMENT.	CONDITION OF PATIENT WHEN TURNING WAS PERFORMED.	RESULT TO MOTHER	RESULT TO CHILD.	CONDITION OF OS WHEN TURNING WAS DETERMINED.	
									RESULT TO MOTHER	RESULT TO CHILD.
1	Mult.	2 months...	Complete...			Exhausted.....			Died.....	Living.
2	Fourth...	7 months...	Profuse...	Complete...	Tampon and prem. deliv.			Died, os easy.....	Died.....	Dead.
3	Mult.	Term...	Profuse...	Complete...		Much exhausted.....		Recovered.....	Recovered.....	Living.
4	Seventh...	Term...	10 days...	Profuse...	Complete...	Much exhausted.....		Well dilated.....	Died.....	Living.
10	Sixth...	Term...	3 months...	Complete...	Tampon.....				Recovered.....	Living.
12	First...		Small....	Profuse...	Complete...	Tampon.....	But little distress.	Dilatable.....	Died.....	Living.
13	Second...			Profuse...	Complete...				Recovered.....	Died.
16	Sixth...	Term...	3 months...	Moderate	Complete...			Dilatable.....	Died.....	Living.
20	Mult...		Sev'l mos...	Profuse...	Complete...			Dilatable.....	Died.....	Living.
22	Sixth...	Term...	3½ months	Moderate	Complete...	Tampon.....		Hazardous.....	Recovered.....	Dead.
24	Fourth...	Term...	2 months	Profuse...	Complete...	Tampon.....		Dilated the os.....	Recovered.....	Dead.
25	Second...	6½ months	15 hours...	Profuse...	Complete...	Ergot.....		Dilated the os.....	Recovered.....	Dead.
28	Eight...	Term...	3 days...	Moderate	Complete...	Tampon, ergot, etc.		Anemic always.....	Dilated.....	Living.
29	Fifth...	Term...	1 month...	Moderate	Complete...	Tampon.....		Os good.....	Recovered.....	Living.
32	Third...	7½ months	1 month...	Profuse...	Complete...			Dilated.....	Died.....	Dead.
33	Eighth...	Term...	6 or 8 weeks	Moderate	Complete...	Ergot.....		Ischaemic.....	Recovered.....	Living.
37	Third...		Some days.	Profuse...	Complete...	Ergot, etc.....		Debilitated.....	Died.....	Dead.
38	Second...		At once....	Profuse...	Complete...			Exhausted.....	Recovered.....	Dead.
39	Second...		3 days....	Profuse...	Complete...			Dilatable.....	Recovered.....	Dead.
42	Second...	8 months...	A tone...	Moderate	Partial.....	Tampon.....		Dilated.....	Recovered.....	Living.
45	Twelfth...	Term...	2 months...	Moderate	Complete...			Par. det. of plac. and tam.	Recovered.....	Dead.
46	Fifth...	Term...	4 months...	small....	Complete...	Spon. exp. of placenta...		Good.....	Recovered.....	Living.
54	Second...	Term...	12 hours...	Profuse...	Partial.....			Ergot and stimulants...	Recovered.....	Living.
55	Sixth...	Term...	6 months...	Profuse...	Complete...			Synecope.....	Recovered.....	Dead.
									Fulness....	Died.....

NO. OF CASES	PERIOD AND DETAILED NATURE WHICH WAS PERIODIC	CHARACTER OF THE HEMORRAGE AND DURATION	PRELIMINARY PLAQUE	TREATMENT	CONDITION OF PATIENT WHEN TREATMENT WAS PERFORMED	RESULT TO MOTHER	RESULT TO CHILD
							PREVENTIAL
36	Sixth.....	Term.....	Atonic.....	Profuse.....	Partial.....	Tampon.....	Kept up well.....
39	Fifth.....	6 $\frac{1}{2}$ months.....	Atonic, etc.....	Profuse.....	Complete.....	Ergot, etc.....	Worst dead.....
63	Fourth.....	Term.....	.....	Profuse.....	Partial.....	Tampon, ergot, etc.....	Pulseless.....
70	Second.....	Term.....	Atonic.....	Profuse.....	Complete.....	Detached placenta.....	Recovered.....
71	Sixth.....	Term.....	..... or 10 days.....	Profuse.....	Complete.....	Whisky.....	Recovered.....
72	Sixteenth.....	Term.....	Atonic.....	Profuse.....	Complete.....	Whisky.....	Recovered.....
73	Seventeenth.....	Term.....	Atonic.....	Profuse.....	Complete.....	Whisky.....	Recovered.....
74	Third.....	6 $\frac{1}{2}$ months.....	Atonic.....	Profuse.....	Complete.....	Foodie.....	Recovered.....
75	Fourth.....	Term.....	6 or 8 weeks.....	Profuse.....	Complete.....	Tampon and stimulants.....	Prostated.....
79	Fourth, etc.....	Term.....	2 or 3 hours.....	Profuse.....	Complete.....	Brandy.....	A plainly dying.....
82	Multi.....	7 months.....	2 months.....	Profuse.....	Complete.....	Premature labor.....	Dilated.....
83	Ninth.....	Term.....	.....	Profuse.....	Complete.....	.....	Recovered.....
85	Fifth.....	.....	.....	Profuse.....	Complete.....	.....	Dilated.....
86	Fifth.....	Term.....	Several weeks.....	Profuse.....	Complete.....	Tampon.....	Exhausted.....
87	Second.....	.....	.....	Profuse.....	Partial.....	.....	Recovered.....
89	Second.....	2 months.....	Profuse.....	Complete.....	.....	.....	Recovered.....
90	.....	.....	.....	Profuse.....	Partial.....	.....	Recovered.....
91	Fifth.....	Term.....	.....	Profuse.....	Complete.....	.....	Recovered.....
92	Third.....	Term.....	1 month.....	Moderate.....	Complete.....	Tampon.....	Exhausted.....
94	Third.....	.....	Five days.....	Profuse.....	Complete.....	.....	Dilated.....
95	Fifth.....	Term.....	2 months.....	Profuse.....	Complete.....	.....	Recovered, Dead.....
96	Third.....	Term.....	At once.....	Mod. ext.	Complete.....	.....	Died at first
97	First.....	Term.....	1 month.....	Profuse.....	Complete.....	.....	Recovered, Dead.....
99	Sixth.....	8 $\frac{1}{2}$ months.....	Ten days.....	Profuse.....	Complete.....	.....	Dilated, etc.....
							Dilated.....

CONDITION WHICH  
SO TO TREATMENT  
WAS PERFORMED

NO. OF CASE	NO. OF PREGNANCY	PREVIOUS DELIVERY WHEN	TIME FROM FIRST DELIVERY TO WHEN DELIVERED.	CHARACTER OF HEMORRHAGE	TIME OF DELIVERY	PLACENTAL PRESENTATION	AUXILIARY TREATMENT	CONDITION OF PATIENT WHEN TURNING WAS PERFORMED.	RESULT WHEN TURNING WAS PERFORMED.	CONDITION OF PATIENT WHEN TURNING WAS PERFORMED.	RESULT TO MOTHER.	RESULT TO CHILD.
100	Fourth	Term	3 weeks	Moderate	Complete	Complete	Complete	Alarming	Dilatable	Recovered	Dead	
101	Third	Ent. preg.	2 or 3 mos.	Profuse	Complete	Complete	Complete	Alarming	Dilatable	Died	Dead	
102	Mult.	8 months	At term	Profuse	Complete	Complete	Complete	Alarming	Dilatable	Recovered	Dead	
103		8 <sup>1</sup> <sub>2</sub> months	4 days	Profuse	Complete	Complete	Complete	Articulo mort.	Dilatable	Recovered	Living	
104		8 <sup>1</sup> <sub>2</sub> months	2 months	Moderate	Complete	Complete	Complete	Articulo mort.	Dilatable	Recovered	Living	
105	Third	6 <sup>1</sup> <sub>2</sub> months	Few days	Moderate	Complete	Complete	Complete	Articulo mort.	Dilatable	Recovered	Living	
106	Mult.	8 <sup>1</sup> <sub>2</sub> months	1 month	Moderate	Complete	Partial	Partial	Articulo mort.	Dilatable	Recovered	Living	
107	Third	8 <sup>1</sup> <sub>2</sub> months	2 weeks	Profuse	Partial	Partial	Partial	Articulo mort.	Dilatable	Recovered	Living	
111	Fifth	7 months	1 month	Profuse	Complete	Complete	Complete	Faint	Dilatable	Recovered	Living	
112	First								Dilatable	Recovered	Dead	

Fifty-eight cases, forty-one mothers recovering and seventeen dying; twenty-five children living, thirty-one dead and two the result not stated.

Almost from the time *placenta previa* was first recognized, version has been the most generally accepted method of hastening delivery in those cases; and from the more recent authorities quoted by Dr. Mears in his paper read before the state society last year, it would appear that "the operation of turning is that in which the great majority of experienced practitioners still place their greatest confidence."<sup>1</sup> But there are conditions in which it certainly is not only inapplicable, but extremely hazardous. Simpson speaks<sup>2</sup> of the following classes of cases in which turning is the most proper and legitimate plan of treatment: 1. When the child is alive and at or near the full term of utero-gestation when labor supervenes. 2. In multiparae, and in which the os uteri is either so dilated or dilatable as to allow of the introduction of the hand and extraction of the fetus without any fear of injury or laceration. 3. In malpresentations of the child.

In forty-one cases the time of pregnancy when delivery was accomplished by version is specified and results shown, as follows:

TIME OF PREGNANCY WHEN DELIVERY OCCURRED.	NUMBER OF CASES.	MOTHERS.		CHILDREN.	
		RECOV.	DIED.	LIVING	DEAD.
At six and a half months.....	3	3	....	2	1
At seven months.....	4	3	1	1	3
At eight months.....	3	3	....	3	....
At eight and a half months.....	3	1	2	1	2
At full term .....	28	20	8	13	14
Total.....	41	30	11	20	20

A glance at the above table shows the mortality to the mother heavier in those cases at full term than in those deliv-

(1) Leishman, quoted by Dr. Mears, *State Trans.*, 1878, page 105.

(2) Simpson's *Obs. Works*, page 691.

ered premature, while to the child there is a heavier mortality in those born before full time. Rigby's advice, that "where the patient is some time short of full term, the os uteri will be found unyielding and but little dilated, it will therefore seldom be possible, and scarcely ever proper, to introduce the hand into the uterus, as it will in all probability be attended with serious injury to the part itself."<sup>1</sup> And this same fear of injury to the mother probably prompted Simpson to give precautions that turning is applicable only when patient is at or near full term, but the experience as shown above is not in accord with their fears; nor is it probable that either of the three fatal cases delivered premature died from laceration or other injury to the cervix or parts of the mother, unless it was case number two.

Simpson's caution, that turning should be resorted to only in multiparae, has not been altogether heeded in this collection. Three cases with the loss of one mother and all three children are reported in the first pregnancy.

A point earnestly insisted upon by all writers, the condition of the os uteri when turning is resorted to, has been mentioned by thirty-two reporters, as follows:

CONDITION OF OS UTERI WHEN VERSION PERFORMED.	NUMBER OF CASES.	MOTHERS.		CHILDREN.	
		RECOV.	DIED.	LIVING	DEAD.
Os uteri dilated or dilatable.....	27	19	8	11	15
Os uteri open but rigid.....	5	3	2	2	2
Condition not mentioned.....	26	19	7	12	14

It is reasonable to suppose this omission on the part of the reporter in not mentioning the condition of the os uteri, was really an omission and not intentional, for a glance at the above shows the mortality greater in those cases in which this condition is specified.

Version was necessitated in six cases, because of malpresentation of the child; and I have classed one case of breech

(1) Rigby's System of Midwifery, page 408.

presentation as a version case, as the hand was introduced through the os uteri and placenta to seize the feet, subjecting the mother to almost as great a risk as had version been actually performed.

The time from first hemorrhage until delivery took place and results are shown, as follows:

	NUMBER OF CASES.	MOTHERS.		CHILDREN.	
		RECOV.	DIED.	LIVING	DEAD.
In a few hours.....	17	13	4	7	9
Few days.....	6	3	3	3	3
One month.....	8	7	1	4	4
Two months.....	9	7	2	3	6
Three months.....	4	3	1	2	2
Longer period.....	4	2	2	4	3

The character of the hemorrhage has been classed and results shown, as follows:

	NUMBER OF CASES.	MOTHERS.		CHILDREN.	
		RECOV.	DIED.	LIVING	DEAD.
Small .....	2	2	...	2	...
Moderate .....	14	9	5	6	7
Profuse.....	37	27	10	15	21

The presentation of the placenta was reported and results shown, as follows:

	NUMBER OF CASES.	MOTHERS.		CHILDREN.	
		RECOV.	DIED.	LIVING	DEAD.
Partial.....	7	6	1	5	2
Complete.....	51	35	16	20	29

In the treatment which I have classed as auxiliary in those version cases, ergot was used with apparently no other object than that of exciting uterine contractions. The tampon was used in two cases to arrest the earlier attacks of hemorrhage. In four cases it is mentioned as having been of no effect, and in eleven cases it would appear to have been used with the view of restraining hemorrhage until dilatation of the os uteri was accomplished, preparatory to version. Whisky and stimulants are referred to by several reporters as being used at the time for its stimulating effect.

Some authors have advised that the hand be passed through the placenta when introduced with intention to turn. The practice, where specified by the reporters, exhibits the following result:

	NUMBER OF CASES.	MOTHERS.		CHILDREN.	
		RECOV.	DIED.	LIVING	DEAD.
Hand passed through placenta.....	7	4	3	3	3
Hand passed at side of placenta.....	12	10	2	7	5

There is danger of laceration of the cervix in turning under any circumstances, but this danger is increased to an extreme degree when the placenta is implanted over a cervix so freely supplied with blood vessels as it is in placenta previa. The body of the uterus may contract well, but the cervical sinuses are not closed and a slight hemorrhage may continue and soon terminate fatally. In such cases, when examined after death, the cervix uteri is found more or less torn. That such was the cause of death in some of the fatal cases in this table is very probable, but in none was it verified by post-mortem examination. Cases four and ninety-nine appear to have died of some form of puerperal fever. Case sixteen had rallied well and died suddenly, three hours after delivery, from supposed heart clot. Case eighty-three died from general debility due to chronic pulmonary disease. Case ninety-six, death was due to ante-partum concealed hemorrhage. In the other twelve fatal cases, they are reported as never rallying, but dying in a few

moments, or within the week, from exhaustion, asthenia or slight post-partum hemorrhage.

Taking the mortality in this collection, where version was performed, and comparing it with the average mortality of the table, and we find it some little heavier. This increased mortality to the mother can not be altogether ascribed to the operation itself, for they were, as a class, under circumstances and conditions making them extremely dangerous before the operation was resorted to; and as for the child, it is very probable that the turning was not as great a factor in increasing the mortality, as asphyxia from the separation of placenta and the delay necessary before version could be performed.

To compare the version cases in this table with the statistics of Simpson's and Trask's collection of version cases, and we have the mortality in each shown, as follows:

	WHOLE NUMBER OF CASES.	MOTHERS DYING.	PER CENT.
Simpson's collection.....	421	144	34
Trask's collection.....	200	59	29
This collection.....	58	17	29

Dr. Robert Greenhalgh, in a paper presented to the London Obstetrical Society in 1864, recommended the induction of premature delivery in cases of placenta previa, after a period at which the fetus could be considered viable, and Prof. T. G. Thomas, of New York, has earnestly advocated the same plan of treatment, and says, in his opinion the induction of premature labor offers greater safety to both mother and child, than that of allowing pregnancy to go on to full term.

There is but one case in this collection—case sixty-nine—that can be classed as such, although two other cases are reported in which labor was brought on prematurely by the physicians, but as version was performed in both cases, they were classed in that table. There are several cases, however, reported in this collection, in which labor came on before full

term, and to ascertain the mortality we will arrange them as follows and include the three cases referred to above.

Cases in which delivery occurred before full term:

NO. OF CASE.	WHEN DELIVERED.	TIME FROM FIRST HEMORRHAGE UNTIL DELIVERY.	CHARACTER OF HEMORRHAGE.	PLACENTAL PRESENTATION.	TREATMENT.	RESULT TO	RESULT TO
						MOTHER.	CHILD.
2	7 months	2 months.	Profuse...	Complete...	Tampon, premature labor and version.....	Died.....	Dead.
6	8½ months	24 hours.....	Profuse...	Complete...	Ergot .....	Recovered..	Dead.
7	6½ months	At once.....	Profuse...	Partial .....	Ergot .....	Recovered..	Dead.
8	7 months	1 week .....	Profuse...	Complete...	Detach. of placenta and ergot.....	Recovered..	Dead.
9	7 months	3 days.....	Moderate	Complete...	Detach. of placenta and ergot.....	Recovered..	Dead.
11	8½ months	3 weeks, once.....	Moderate	.....	.....	Recovered..	Living.
15	8½ months	2 days.....	Profuse...	Partial .....	Tampon and forceps.....	Recovered..	Dead.
25	6½ months	15 hours.....	Profuse...	Complete...	Ergot and version.....	Recovered..	Living.
26	8½ months	6 weeks ...	Profuse...	Complete...	Tampon and ergot.....	Died .....	Dead.
27	8½ months	30 hours....	Small ....	Partial .....	None .....	Recovered..	Living.
32	7½ months	4 weeks...	Profuse...	Complete...	Version .....	Recovered..	Living.
42	8 months	At once.....	Moderate	Partial .....	Part. detach. placenta, tampon and turning...	Recovered..	Living.
52	8 months	5 weeks...	Profuse...	Complete...	Detached placenta.....	Recovered..	Dead.
53	6½ months	1 day.....	Profuse...	Partial .....	Ergot and ruptured membrane .....	Recovered..	Dead.
58	8½ months	4 weeks...	Moderate	Partial .....	Forceps .....	Died .....	Dead.
59	6½ months	At once.....	Profuse...	Complete...	Ergot and turning.....	Recovered..	Dead.
69	7½ months	2 weeks...	Moderate	Complete...	Induction premature labor and forceps.....	Recovered..	Living.
74	6½ months	At once.....	.....	Complete...	Version .....	Recovered..	Dead.
81	8 months	At once.....	Profuse...	Complete...	Ruptured membranes.	Recovered..	Living.
82	7 months	2 months.	Profuse...	Complete...	Induction premature labor and version .....	Recovered..	Living.
98	8 months	14 hours.....	Profuse...	Complete...	Worse than none.....	Died undelivered.....	
99	8½ months	10 days.....	Profuse...	Complete...	Version .....	Died .....	Dead.
103	8 months	At once.....	Moderate	Complete...	Version .....	Recovered..	Living.
104	8½ months	4 days.....	Profuse...	Complete...	Version .....	Died .....	Dead.
106	6½ months	4 days.....	Moderate	Complete...	Version .....	Recovered..	Living.
108	7½ months	At once.....	Moderate	Complete...	Ergot .....	Recovered..	Dead.
109	8 months	1 month...	Small.....	Complete...	Tampon and ergot.....	Recovered..	Dead.
111	8½ months	2 weeks...	Profuse...	Partial .....	Ergot, tampon and version.....	Recovered..	Living.
112	7 months	1 month...	Profuse...	Complete...	Tampon and version....	Recovered..	Dead.

RECAPITULATION OF THE ABOVE CASES.	WHOLE NUMBER OF CASES.	MOTHERS.		CHILDREN.	
		RECOV.	DIED.	LIVING	DEAD.
Delivered at six and a half months....	6	6	....	2	4
Delivered at seven months .....	5	4	1	1	4
Delivered at seven and a half months	3	3	....	2	1
Delivered at eight months.....	6	5	1	3	3
Delivered at eight and a half months	9	5	4	3	6
Total delivered before full term.....	29	23	6	11	18

The above table exhibits a much lighter mortality to the mother than the average of this collection, while to the child it is a little heavier.

These cases, however, should not be taken as corroborating or denying the correctness of Dr. Thomas' assertion. They have not occurred under the physician's close watching as they would have done, could he have selected his own time, and by Barnes' or Molesworth's dilators brought on delivery while under his personal management; and if we examine carefully the fatal cases in the above table, I believe we are justified in concluding, that were a similar collection of cases treated by the induction of premature delivery, the mortality to both mother and child would be less than is shown here.

With the facilities that the obstetrician may have at his command at this day, the dilators which are almost universally commended, and other agents which are comparatively safe and reliable, the physician, and especially the country practitioner, has more to encourage him in adopting the practice so earnestly urged by Greenhalgh and Thomas than any other method, to avert the dangers that in this paper and all writings upon the subject, are shown to be greater than anything that he as an obstetrician encounters in his practice.

The following table shows the mortality to both mother and child in all statistical collections to which I have had access:

NAME OF WORK	NUMBER OF CASES	WHOLE NUMBER OF CASES.		MORTALITY.			
		MOTHERS.	CHILDREN.	MOTHERS.		CHILDREN.	
				NUMBER OF CASES.	PER CENT.	NUMBER OF CASES.	PER CENT.
Churchill's collection <sup>1</sup> .....	174	.....	48	27.59	.....	.....	.....
Simpson's collection <sup>2</sup> .....	654	.....	180	27.52	.....	.....	.....
Simpson's table <sup>3</sup> .....	141	113	10	7.09	80	70.79	
Trask's statistics <sup>4</sup> .....	343	237	83	24.19	163	68.78	
Glisczynski <sup>5</sup> .....	90	90	14	15.55	28	31.11	
This collection .....	112	109	30	26.78	61	55.96	
	1514	549	365	21.45	332	56.66	

(1) Churchill's System of Midwifery, page 431.

(2) Simpson's Obstetrical Works, page 601.

(3) Simpson's Obstetrical Works, page 629. Cases of entire detachment of placenta.

(4) Trask's Prize Essay, Trans. Am. Med. Asso., volume 8, 1855, page 595.

(5) Quotation in Am. Jour. Med. Sciences, July, 1861, page 290.

NOTE—By request of the State Medical Society, at its meeting in May, 1879, I will continue my collection of statistics of placenta previa, and report at the meeting in 1880. Those of the profession in the state, whose experience has not been given in this paper, will please write me and I will forward them blanks upon which to report their cases for next year.

E. W. KING, M. D., Galena, Ind.